sea level at bankfull stage

Watershed boundary

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Gaging station

HEIGHT AND FREQUENCY OF FLOODING AT GAGING SITES CAN BE RELATED TO LOCATIONS IN THE VICINITY

Peak flows at the gaging station Pelican River near Detroit

Stage of the Otter Tail River below Orwell Dam near Fergus

Lakes are influenced by natural storage in upstream lakes and Falls is controlled by operation of the dam. Maximum stages

water did not overflow the banks. The average recurrence intervals at Pelican River near Fergus Falls and Otter Tail River near

OF THE GAGE BY USE OF TOPOGRAPHIC MAPS TO DETERMINE CHANNEL SHAPE

at this gage are those related to height of water below river bank. Detroit Lakes were caused by ice jams.

HYDROGRAPHS FOR THE PELICAN AND OTTER TAIL RIVERS SHOW SIMILAR VARIATION IN THE SEASONAL AND MONTHLY MEAN DISCHARGE ALTHOUGH THE RECORDS FOR OTTER TAIL RIVER

Most discharges of the lower Otter Tail River have been modified by the operation of Orwell for a total of 209 days during the winters of 1946, 1949, 1950, because of freezeup. The

Reservoir since March 1953. No flow was recorded on the Pelican River near Fergus Falls severity of the drought of the 1930's is shown by the hydrograph for the Otter Tail River.

BELOW ORWELL DAM NEAR FERGUS FALLS ARE AFFECTED BY REGULATION BY POWER PLANTS AND ORWELL RESERVOIR

Period used for determination of water yield

RUNOFF IN THE HEADWATERS OF THE PELICAN AND OTTER TAIL

RIVERS IS OVER TWICE THE RUNOFF IN THE GLACIAL LAKE AGASSIZ

PLAIN.—Precipitation is similar in distribution in the watershed, decreasing

from east to west (See precipitation map, sheet 1). Flat land surface and small

capacity channels contribute to flooding and slow surface runoff in the lake plain.

Much of the lake plain is drained by ditches. The streams generally have well-

defined channels in the morainal area.